

# AVICULTURAL MAGAZINE



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## THE AVICULTURAL SOCIETY

The Avicultural Society was founded in 1894 for the study of British and foreign birds in the wild and in captivity. The Society is international in character, having members throughout the world.

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**RUTH SAWYER (née EZRA)**  
**June 13th 1919 - August 21st 2007**

Our President Ruth Sawyer passed away on August 21st 2007 at the age of 88.

Ruth spent her early years at Foxwarren Park, the home of her distinguished father Alfred Ezra OBE and her mother Muriel. Foxwarren Park was a treasure trove of avicultural delights which of course included the last remaining specimens of the now extinct Pink-headed Duck *Rhodonessa caryophyllacea*.

After Foxwarren Park was sold, Ruth moved to Chestnut Lodge in 1956 and Raymond joined her soon afterwards. The collection grew from humble beginnings and as more aviaries were built the number of species grew and the collection and garden developed into the magnificent spectacle they have become today. Some 18 first UK breedings have been achieved and the many societies and groups that visit the collection and garden each year is a tribute to the excellence to be found there.

Ruth will be greatly missed by her many friends and aviculture has lost one of its greatest practioners. Raymond is of course going to continue with their marvellous creation and I dare say that new species will be added as and when desired.

I know all members of our society will join me in sending our sincere and heartfelt condolences to Raymond in his tragic loss.

Christopher Marler  
Chairman  
The Avicultural Society

# Ruth Muriel Sawyer



**13th June 1919 - 21st August 2007**

**President  
The Avicultural Society  
1986 - 2007**

# AVICULTURAL MAGAZINE

THE JOURNAL OF THE AVICULTURAL SOCIETY

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**RUTH MURIEL SAWYER (née EZRA)**  
**Who died on August 21st 2007, aged 88 years**  
**A EULOGY**  
**St Andrews Church, Cobham, Surrey**  
**Thursday August 30th 2007**

When Raymond asked if I would say a few words on behalf of Ruth I accepted with enthusiasm; for I knew it would be an opportunity to discover far more than I already knew about this wonderful lady; I must say however that I agreed with some trepidation having only known Ruth since 1992 after joining Raphael Zorn, the firm of City stockbrokers originally established by her grandmother's family, the Raphaels, in 1787.

Ruth was born on June 13th 1919, the eldest daughter of Muriel (née Sassoon) and Alfred Ezra. Ruth and her younger sister Aline grew up at Foxwarren Park, the family's large mansion near Cobham, Surrey. Alfred was a highly respected man whose occupation was noted on his passport as simply "Gentleman", whilst Muriel, some 30 years Alfred's junior was a prominent society figure. Alfred was awarded an OBE after the war for services during the war, but was best known and devoted much of his life to his collection of animals and especially birds. He was an aviculturist of world renown and President of the Avicultural Society (the oldest of the avicultural societies) - a post which Ruth also retained until she died. Aviculture, for those who like me missed it at school, is defined in the *Oxford Dictionary* as the rearing of birds, or bird fancying; a rather mundane description I feel for what is really involved.

Ruth's upbringing was very much that of an upper class English family of the time, and from an early age she demonstrated real ability in music - particularly the piano, and in tennis. Regular visits were made every Tuesday for piano lessons with Mr Steinway and she continued playing all her life; I never had the privilege of hearing her but I am told by those who did that she played especially beautifully. There were also frequent visits to recitals and concerts, and of course the opera. Tennis lessons at the Hurlingham

Club were a regular feature and Ruth was a good and competitive player; she particularly enjoyed the Wimbledon fortnight and I soon learnt not to call her after lunch during those weeks.

During the war Ruth nursed at Weybridge Hospital and in this we see the beginnings of a service to the community which was to remain with her for the rest of her life.

In 1956 after Foxwarren Park was sold Ruth moved to Chestnut Lodge, her home until she died. She moved with her old childhood nanny - a formidable woman by all accounts who liked to control every aspect of Ruth's life, and the nanny's husband who had also been the butler at Foxwarren. Now the butler had unfortunately fallen for every butler's greatest temptation, and there is a story that Raymond tells of the only time that he ever saw Ruth annoyed. Dinner was being served one evening when the butler appeared bearing the wine, and not for the first time considerably the worse for wear. Beating an unsteady path towards the dining room table it seemed as if he might fall completely upon it, when recovering at the last moment he put down a hand, but unfortunately straight into Ruth's soup scattering the contents all over her dress. Ruth lifted her voice ever so slightly and said "This is enough!"

Now I am told that Ruth's companions upon her arrival at Chestnut Lodge included her beloved dogs and just six chickens. These were surely humble beginnings as anybody who has seen the displays of birds now can testify. Ruth had met Raymond sometime before, as he had known her father through their shared interest in aviculture; and gradually over the years through their common interest the collections of animals and birds at Chestnut Lodge grew. I do not propose to detail their enormous achievements in this area as these are already well known. However as an outside observer I would say only this; I have never seen any birds or animals so beautifully kept and so apparently content as those at Chestnut Lodge.

All her life Ruth took a great interest in everything that went on around her and like her mother loved to entertain. Ruth was President of the Avicultural Society, Patron of the Foreign Bird League and the Southern Foreign Bird Club and her summer garden parties for these and other organisations which she generously supported were special occasions. In recent years the garden was also opened as part of the National Gardens Scheme.

Ruth studiously sent out large numbers of Christmas cards - all handwritten, and with these included gifts of £25 for her godchildren, continuing a tradition of over 60 years. I wonder how many of us have godparents like that, or indeed perform with the same due diligence.

Ruth did not cook, she did not drive and she had little interest in administrative or financial matters or indeed material things. However, she

and Raymond made a marvellous team with shared interests. At Chestnut Lodge the food was always delicious and guests were beautifully looked after; even the dogs were allowed to devour a whole bowl of coffee sugar after lunch. The gardens were a joy to all their many visitors, and the Japanese garden with its bonsai trees and superb carp ponds is a picture of calm and simplicity. Their achievements in the world of exotic and domestic birds are of world renown.

Ruth, in your life you have been kind and generous, you have been thoughtful and considerate, you have been interested in people and you have valued friendships. You have been a loyal friend, companion and wife. In short you have stood out as a very green oasis in the modern world. Your final days were spent at home as you would have wished surrounded by those you loved. You have touched us all, and the prints from your fingers will remain with us all for years to come.

**Christopher Jeffreys**  
(Lord Jeffreys)

## **FAREWELL**

There is so much I would love to say about Miss Ruth, so many memories, so many good times, so many wise words and so many tears.

She was eccentric in her ways, but you never saw her without her make-up or a smile on her face. I had the pleasure and honour of knowing Miss Ruth for 19 years and it is with sadness in my heart that I say farewell to her today.

She was one of the most caring, compassionate and loyal people I have ever had the pleasure to meet. She enjoyed every day of her life and every day I will miss her, she will always be in my thoughts and prayers. Never again will I do a garden party without thinking about madam buttering the bread; go into the chemist without thinking about her long list of make-up; serve dinner without thinking how much is she feeding to the dogs under the table; and never again will the signature tunes of her favourite TV programmes, *Coronation Street* and *Keeping up Appearances*, be heard without a sad heart.

Ruth's personality was outgoing, outstanding and unforgettable. Her laugh and sense of humour were unique. They say the stars always shine bright at night, but you will always shine brighter in my heart.

Goodbye my precious madam.

**Sylvia Hall**  
**Housekeeper - Chestnut Lodge**

## END OF AN ERA

With the passing of our President Mrs Ruth Sawyer (née Ezra), there is no longer a member of the Ezra family in the society. Its long association with the Avicultural Society started with Ruth's uncle Sir David Ezra, who joined the society in June 1912, followed a few months later by her father Alfred Ezra. They were sons of Elias David Ezra, a prominent businessman in Calcutta, India, where Sir David Ezra was several times Mayor of Calcutta.

Although Ruth's father had a London house he always preferred the country so, in 1919, acquired the 300 acre (approx. 120 hectare) estate of Foxwarren Park, Cobham, Surrey, in which he was able to indulge his passion of keeping birds and mammals under near-natural conditions. The rarest of all his birds were the Pink-headed Ducks *Rhodonessa caryophyllacea* of which, in 1932, he had several males, but only one female. They were obtained through his brother in Calcutta. He never succeeded in breeding the Pink-headed Duck, a species which is extinct now, but was first in the UK to breed a long list of other species including the Superb Starling *Lamprolornis superbus* (1924), White-crowned Starling *Spreo albicapillus* (1929), Bali Starling *Leucospa rothschildi* (1931) and Bristle-crowned Starling *Onycognathus salvadorii* (1931), Rüppell's Long-tailed Starling *L. purpuropterus* (1933), Western Bluebird *Sialis mexicana* (1937), Mountain Bluebird *S. currucoides* (1938) and White-crowned Robin Chat *Cossypha albicapilla* (1939).

Fred Barnicoat wrote recently about the annual garden party at Foxwarren Park, the first account of which was written by David Seth-Smith. On that occasion, May 16th 1925, some 40 members accepted the invitation of Mr and Mrs Ezra, who kindly provided a charabanc (a motor coach) for the party which departed from Hyde Park Corner. The generous hospitality of Mr and Mrs Ezra was well known throughout the world and the annual garden party was the highlight of the year for members of the Avicultural Society.

Jean Delacour met Alfred Ezra for the first time, through his old friend Hubert Astley, whom Ruth's father succeeded as President of the Avicultural Society. Alfred Ezra was, wrote Jean Delacour, a pioneer in keeping nectar-feeding birds and had invented the formula - a mixture of honey, Nestlé's condensed milk and Mellin's food - that was used for many years to feed sunbirds and hummingbirds. Between the two world wars, Jean Delacour often spent a week or two each month in England with Ruth's father. His houses in London and at Foxwarren Park were, wrote Jean Delacour, almost as much home for him as was Clères, his own home in France, where Ruth's father often stayed. They used to visit bird collections and went to bird shows and attended meetings of zoological and ornithological clubs and



societies. They shared the birds brought back by collecting expeditions and were constantly giving each other specimens they had obtained or reared. Jean Delacour wrote that Alfred Ezra's generosity and unselfishness were proverbial and he benefited from them more than anyone else. They enjoyed 20 years of delightful friendship and close association, including a marvellous visit to India in 1933-1934, where at his Calcutta home, Ruth's uncle kept an astonishing number of birds and other animals, many of which eventually found their way to Foxwarren and Clères. Many of the birds Delacour brought over from Indochina also went to Foxwarren. Collectors such as Webb, Cordier, Frost and Shaw Mayer brought over great rarities for them from around the world, many imported for the first time and, it was probable, he concluded, that never again would aviculture reach such a high level.

Jean Delacour and Alfred Ezra sat together on the council of the Zoological Society of London. Ruth's father had become a Fellow of the Zoological Society of London in 1909, soon after which he was elected a member of its council, on which he served for many years. He was a most generous contributor to the zoo collection, making valuable gifts including Elephants *Elephas maximus*, Tigers *Panthera tigris* and other Asiatic animals, as well as a pair of Kodiak Bears *Ursus arctos middendorffi*, which lived at Whipsnade and bred there.

Ruth was elected to the council of the Avicultural Society in November 1963 and, subsequently was elected a Vice President, and then, on the death of Jean Delacour in 1985, was elected President of the Avicultural Society. In 1970, Raymond Sawyer had joined Ruth at Chestnut Lodge and together they assembled the finest private collection of birds in this country, if not in Europe. It became world-famous and was, and continues to be, visited by many notable aviculturists from around the world. To date some 18 or so first UK breedings have occurred there. The President's Garden Party for Avicultural Society members and their guests was hosted each year by Ruth and Raymond. All of the money raised by the garden parties, Ruth most generously donated to the society's funds and this in large part, accounts for the society's present sound financial footing. When Ruth and Raymond married in 2004, their many friends were delighted at the news.

Ruth was the ninth President in the society's 113-year history. Her father, Alfred Ezra OBE, held the office from 1926-1955.

## **HUSBANDRY GUIDELINES FOR HAND-REARING THE PINK-BACKED PELICAN *Pelecanus rufescens***

by Michelle Stevens

### **Introduction**

The Pink-backed Pelican is widespread in the Afrotropics, including south-west Arabia, and formerly bred on the Amirantes, Seychelles and Madagascar (Hockey et al. 2005). They describe it as locally fairly common with a global population estimated at 50,000-100,000 birds. However, in South Africa it is classified as Vulnerable due to the small population size and ongoing wetland degradation and loss. Zimmerman et al. (1996) described it as widespread on lakes, rivers and seasonal flood waters, also coastal estuaries and salt pans. Colonies are often small, widely scattered, and may be some distance from water. It forages singly, catching fish with an heron-like snapping action. Snow & Perrins (1998) stated that it breeds over much of Africa south of the Sahara and on Red Sea coasts north to about 23°N (they also noted that in Egypt it is an increasingly common, regular (summer?) visitor to southern parts of Lake Nasser). It nests colonially. Two to four eggs are laid in a small, unlined, very dirty nest of sticks, high in a tree, in a bush or even on the ground (Mackworth-Praed & Grant, 1957).

### **Longleat Safari Park**

The group of pelicans at Longleat Safari Park consists of 15 Pink-backed Pelicans and a male Spot-billed Pelican *P. philippensis*. The pelicans live on a large lake, which has a small sheltered island, at the front of which nesting platforms have been constructed (see photo p.113). At Longleat the pelicans breed from June-September. This study covers the practical husbandry of the Pink-backed Pelican and describes problems encountered hand-rearing this species.

### **Aims and objectives**

The aims and objectives of this study were to produce husbandry guidelines on the hand-rearing of the Pink-backed Pelican, which can be used by those keeping and breeding this species. Brouwer et al. (1994) stated that there is a paucity of literature on hand-rearing techniques.

I set out to gather information from collections which keep and breed this species, and use that information and the information I have acquired at Longleat Safari Park, to compile an accurate set of husbandry guidelines. I wanted the information to include details of the diet used to hand-rear the chicks in other collections and the effect the diet had on their growth rate. I also wanted to try to find out if other collections experience the same problems as we do and their management programmes to deal with them.

## Method

To find out which collections were keeping and breeding this species, I began my research by visiting the ISIS database on the internet. From that I was able to select five collections which had bred this species in the past six months. They were:

Tierpark Berlin, Germany  
Odense Zoo, Denmark  
Vogelpark Avifauna, Netherlands  
San Diego Wild Animal Park, California, USA  
Zoo Dvur Králové, Czech Republic

I wrote to these collections and asked if they hand-reared their chicks, and also asked for information on the diet they used and details of the chicks' weight gain, so that this information could be used for comparative analysis. With the letter I sent out a short questionnaire.

I received replies from the first three collections on the list. One in particular, Tierpark Berlin, was especially helpful and provided me with information on its hand-rearing diet and a list of weights of eight of its chicks. I have included this information in the study. I have also included data collected during past hand-rearing attempts at Longleat Safari Park and information gained through my own experiences hand-rearing this species.

Through talking to Mike Curzon, an extremely informative and willing contact and friend, I learned of an article about breeding the Pink-backed Pelican written by Paul Wexler and published in the *Avicultural Magazine* Vol.103, No.2, pp.80-84 (1997). This article focused on the rearing of a pelican chick hatched from an egg laid at Longleat Safari Park, and I was able to extract some relevant information from it. My Senior Head of Section, Mark Tye, who has 10 years' experience of hand-rearing this species, also provided me with much useful information. I also consulted ornithological and zoological literature.

## Results

### Reasons for hand-rearing chicks

There are several reasons why the eggs are removed for artificial incubation and the chicks are hand-reared. At Longleat Safari Park the Pink-backed Pelicans have been laying fertile eggs since 1994. However, when these have been left in the nests, after a period of time, they have disappeared. It is presumed that unpaired pelicans rolled them off the nest platforms into the water. Brouwer et al. (1994) stated that unpaired birds,

especially unpaired males, can disturb the breeding activities of pairs by seizing their nests and breaking their eggs.

This may have been the cause of problems at Longleat, where the ratio of males to females at the time of the study was 10:5. Many of the birds in the colony are hand-reared birds, but without further research it is not possible to say whether this has had a detrimental effect on their ability to successfully rear their own young. An advantage of hand-reared birds is that they are calm and steady around the keepers, which makes nest inspections relatively stress free. Another problem that was encountered was the death of a chick at the point of pipping, thought to be due to a problem with the humidity in the nest (Wexler, 1997). Of the eggs that were left in the nests to be incubated and the chicks reared naturally in 1999, only 12 of the eggs hatched and none of the chicks survived past 16 days old. Neglect by the parents, a retained yolk, leading to a yolk sac infection, and ejection from the nest (it is not known if this was by the parents or by other members of the colony) are thought to have led to premature deaths.

Tierpark Berlin has a mixed colony of Pink-backed and Great White Pelicans *P. onocrotalus*. The presence of the Great White Pelicans has had a detrimental effect on the breeding success of the Pink-backed, as they kill Pink-backed chicks and disturb the adults whilst they are breeding (Kaiser, 2006). These are just some of the problems which make it necessary to hand-rear this species, in order to achieve breeding success. However, at Odense Zoo and Vogelpark Avifauna, they prefer to leave the parents to rear their own young, in order to avoid imprinted birds.

### **Incubation**

The nests are checked for eggs once or twice a day, and any freshly laid eggs are removed for artificial incubation. All eggs are weighed before being placed in the incubator and are weighed throughout the incubation period. They are incubated at a temperature of 37.5°C (99.5°F) and 60% humidity and should achieve a 15% weight loss during the 30-34 day incubation period. This is plotted on a graph and is carefully monitored. If the weight goes significantly over either side of the 15% weight loss line, the humidity must be adjusted accordingly. If an egg is losing too much weight, the humidity needs to be increased. Similarly, if an egg is not losing enough weight, the humidity needs to be reduced to create a drier atmosphere in the incubator (Harvey, 1990). It can be a good idea to have two incubators set at different levels of humidity, especially if incubating more than one egg, as individual eggs may have different requirements.

## **Hatching and immediate aftercare**

Following the internal pip (on approximately day 30), the egg is placed in a hatcher at a temperature of 36.5°C (97.7°F) with high humidity to prevent the egg from drying out. It is left in the hatcher until the chick has hatched (at approximately day 32). There it remains for a few hours to acclimatise, after which it is placed in a brooder at a temperature of 36°C (96.8°F). Again the humidity is kept high to avoid the chick becoming dehydrated and developing dry, peeling skin (Wexler, 1997).

The chicks are placed in plastic bowls 6in (15cm) in diameter and 4in (10cm) deep. The bowls are lined with hay and lime tree twigs (lime tree twigs are also placed on the nesting platforms and are used as nesting material), cut to appropriate lengths to fit into the bowls (see photo p.116). Each morning the chicks are weighed and placed in freshly made nests. It is important not to use twigs that are too small, as an inquisitive chick may try to swallow them, and could perforate its gut. Placing the twigs in the nesting bowls is important, as in the past there have been problems with foot deformities.

The twigs seem to encourage the chicks to use their feet and gives them something to grasp hold of, instead of just scrunching their feet together. They also provide a sturdy platform on which the chicks can move about, as opposed to being stuck in one area of the bowl, which can happen if only hay is used. The chicks are taken out of the bowls only to be fed, at which time they are placed under a heat lamp to avoid a sudden change of temperature. As the chicks develop, they need to be moved into larger containers to allow them to move about and build up their strength. We have found that plastic washing-up bowls and plastic crates are ideal for this purpose.

The chicks are removed from the brooder after two to five days and placed under a heat lamp set at a height of approximately 3ft (1m). The chicks are not placed directly under the lamp, but to one side of it, as the heat given off by the lamp is very hot and dry. We try to maintain the temperature at approximately 30°C-33°C (86°F-91.4°F). It is carefully monitored in case it gets excessively hot or the temperature drops, in which case the placement of the heat lamp and bowl have to be adjusted accordingly. As the chicks' down starts to develop, they become less dependent on the heat lamps, which are then turned on only at night.

## **Diet and feeding methods**

At Longleat we have changed the hand-rearing diet three times since 1998. The seasonal availability of certain items of food was partly the reason for these changes, but there was also an element of trial and error to find out which was the best diet to promote growth and prevent health problems.

Table 1 details the different diets used at Longleat over the years, including the current diet. Also included in Table 1 is the diet used at Tierpark Berlin and the diet of what is thought to have been the first chick hand-reared in the UK. The egg was laid at Longleat, but the chick was hand-reared for the first 27 days by Paul Wexler at Birdworld, Surrey. It was then transferred back to Longleat.

The diets have been tried and tested over the years and have proved relatively successful. However, it should be remembered that individual pelican chicks vary and what works for one may not work for others, and some chicks progress faster than others. The chicks are not fed for the first 12-24 hours. This is to maximise the chance of the yolk being absorbed. If for any reason the yolk is retained, this can lead to infection (see later). This is something which has been a problem throughout the hand-rearing of Pink-backed Pelican chicks at Longleat.

At Birdworld the chick's food was liquidised and spoon-fed to it, a method that initially was not successful, as much of the food was voided and left the chick in danger of suffocation (Wexler, 1997). Therefore, it was decided to use small, boned, carp, which had been scalded and then scraped with a knife to remove the flesh. At Longleat we scald sprats by placing them in very hot water to soften them. As sprats can be quite rigid and difficult to digest, this helps the chicks swallow the fish. We choose not to liquidise the food as the chicks take well to whole trout (1g-5g in weight) during the first week, and these are digested easily. They then easily progress onto whole sprats. After observing Sacred Ibis *Theskiornis aethiopicus* raising their chicks successfully, it was suggested that we should make a change to the way in which the pelican chicks are fed. As a result, they are now encouraged to pick up the food for themselves from a tray or their bedding, as opposed to being fed by hand.

Until recently the chicks were fed every two hours from 8.00am-8.00pm and did not always seem keen to feed. Now they are fed on demand, with the interval between feeds often varying between one to three hours, between 8.00am-8.00pm. The 8.00pm feed is cut out at days 17-20 and by days 36-40 the feeds are reduced to just two a day. The chicks are not mollycoddled, if they do not take the fish within a short period of time, they are left on their own for a while with the fish beside them; if they continue to refuse to eat it, then that feed is withheld. It can be frustrating if a chick does not eat the food, however it is vital that the chicks learn to help themselves. Force-feeding is not an option, as it is stressful for all concerned and the chick is likely to bring the food up (Mike Tye pers. comm.). Chicks can become lazy when it comes to taking more than one small fish, which is not enough to attain a healthy weight gain if this is repeated at every feed. One method of reducing this is to give such chicks a very small piece of fish to start with,

which will sometimes encourage them to take more.

Chicks at Longleat are offered de-ionised water, kept warm under the heat lamp and administered via a 2ml syringe. De-ionised water is used, as it is purer than tap water. Chicks are offered water at every feed, with care being taken not to 'fill them up' with water during the early stages, as it is important that they get used to taking food. When hand-rearing pelican chicks in 2005, I observed that offering them a small amount of water (1ml-2ml) at the start, can encourage them to take more fish. Towards the latter stages of being hand-reared, the chicks are allowed as much water as they want, provided they are eating well.

## **Supplements**

Starting from the first day of feeding, the chicks at Longleat are given a vitamin and mineral supplement. Collections such as Tierpark Berlin and Birdworld appear not to give supplements during the first week (Tierpark Berlin does though give a digestive enzyme), but instead give one from the second week. At Longleat we use a high calcium multivitamin and mineral supplement called Avimix. This used to be mixed in the water, but is now sprinkled sparingly on the food once a day. This is done for approximately the first 35-40 days, after which they receive one Mazuri fish-eater tablet per day. The chicks at Longleat are also given a probiotic called Protexin. This is to help the microflora in the gut, as the chicks are given antibiotics from an early age (see later).

## **Average food intake and weight gain**

The first graph (p.114) charts the average food intake of Longleat's 18 Pink-backed Pelican chicks hand-reared since 1996 (this figure includes the one hand-reared at Birdworld). The average food intake for the first 30 days was worked out originally for males and females, however it was decided that the results did not differentiate sufficiently to warrant a comparative chart. I have through my own hands-on experience, observed differences in the food intake of the sexes at about 50-60 days. At this time the female's appetite slows down and she consumes just one or two medium-sized fish (approx. 500g of food) per day, whereas the male will consume three or four fish (800g-1,000g of food) per day with ease.

The amount of food a pelican eats varies according to each individual's appetite and environmental factors. Pelicans being hand-reared together at Longleat compete with each other for food and seem to take the food with more conviction. Chicks hand-reared in captivity have a more or less unlimited supply of food, so the chance of premature death due to starvation is highly unlikely. In the wild, however, smaller and younger chicks often get attacked by their older siblings. The greatest period of chick mortality

Table 1. Different diets used to hand-rear chicks. The diet given at each weekly stage can vary according to each individual chick's progress.

<b>Diet A</b>	<b>Tierpark Berlin</b>
Week 1.	Baby mice enriched with Enzynormforte, a digestive enzyme.
Week 2.	The addition of small freshwater fish and a vitamin and mineral mixture.
Weeks 3 & 4.	Freshwater fish only and vitamin and mineral mixture.
<b>Diet B</b>	<b>Longleat (1998)</b>
Week 1.	Whole fresh trout fry, whole fresh whitebait and scalded sprats whole or cut in half, plus Avipro vitamin and mineral supplement.
Week 2.	Whole scalded sprats and Avimix only.
Week 3.	Scalded sprats and small mackerel, whole or half a fish, depending on size (tail cut off), plus Avimix.
Week 4.	Whole mackerel only complete with tail, plus Avimix and later on Mazuri fish-eater tablet.
<b>Diet C</b>	<b>Birdworld (1996)</b>
Week 1.	Liquidised sprat, mashed carp and pinky mice spoon-fed to chick, plus flaked cod and chopped day-old chicks.
Week 2.	Anchovies, chopped sprats and chopped day-old chicks, plus the introduction of small whole sprats. Avimix.
Week 3.	Scalded whole sprats, plaice fillets and day-old chicks.
Week 4.	Scalded sprats and mackerel.
<b>Diet D</b>	<b>Longleat (2001)</b>
Week 1	Scalded sprats cut in half diagonally. Avimix mixed in water.
Week 2	Scalded whole sprats. Avimix mixed in water.
Week 3	Scalded whole sprats and mackerel tails. Avimix mixed in water.
Week 4	Scalded sprats and mackerel. One Mazuri fish-eater tablet per day.
<b>Diet E</b>	<b>Longleat (current diet)</b>
Week 1	Whole fresh carp or trout fry, warmed in hot water and sprinkled with Avimix. Protexin probiotic once a day.
Week 2	Trout fry and the introduction of scalded small sprats, whole or cut in half. The chicks are weaned off trout fry during the course of the week. Avimix sprinkled on food.
Week 3	Scalded whole sprats with their tails on and the introduction of small mackerel with their tails cut off. Avimix sprinkled on food.
Week 4	Scalded sprats and later mackerel or herring only complete with their tails plus one Mazuri fish-eater tablet per day.



is not during the first week after hatching, but later when competition for food is evidently severe and the danger of falling from the nest is at its greatest (Johnsgard, 1993).

### **Problems during rearing**

During the hand-rearing of this species at Longleat, a recurrent problem has been the premature death of chicks between six to 17 days old due to yolk retention. Of the 26 premature deaths that have occurred since 1998, 15 were from suspected yolk sac infection; this included one bird which was being reared by its parents. Tierpark Berlin did not list this or any other problems when answering the questionnaire.

The symptoms that appear to be synonymous with yolk sac infection include:

- Fits/convulsions.
- Regurgitation.
- Hanging head over side of nest bowl.
- Laboured breathing.
- Loss of appetite.
- Lethargy between fits/seizures.
- Pecking at air in a gulping fashion.

Various methods of managing this infection have been employed over the years. All chicks are given an antibiotic for the first three weeks of their life. The antibiotics used have changed over the years. At present Synulox palatable drops are given three times a day for the first 14 days at a rate of 0.25ml/kg. The antibiotic is then changed to Baytril 2.5% oral solution given at a rate of 0.4ml/kg. The change is to prevent resistance to any one antibiotic. The new feeding regime that has been implemented is also aimed at combating yolk retention. One of the chicks reared in 2005 was given an ultrasound scan at 12 days old to see if the yolk had been retained. This proved negative. An unobtrusive yolk sac removal operation can be carried out, however there is an element of risk during anaesthesia and from post-operative infection.

Other problems have included regurgitation and deformed legs. The first can be a symptom of yolk retention, but may also be a sign of overfeeding. Leg and foot deformities were an issue in 2001, when chicks developed brittle bones and splayed legs. Husbandry techniques were changed (i.e. the diet and the proper administration of vitamin and mineral supplements, plus the use of lime twigs in the nest baskets and crates), since when there have been no further incidences of this problem.

## **Pinioning**

Chicks at Longleat are pinioned from two to five days old. We prefer to do this as soon as possible, not only to minimise stress but also because at this young age the bones are smaller and softer. Pinioning is used as a necessary means of restraint. Our pelicans are housed in an open enclosure and if they were full-winged, they could fly out into the park and could fall prey to large carnivores. Joost Lammers of Vogelpark Avifauna stated that there they pinion their birds in the first week or as soon as possible. At Tierpark Berlin they are pinioned at one week old. At Odense Zoo they are not pinioned at present, but were in the past.

## **The move outside and integration into the group**

At about days 30-36 the chicks are moved into an outdoor exercise pen but have access to a heat lamp at night. They are moved outdoors so that they can acclimatise and have the opportunity to move about more and exercise their wings. They become increasingly messy if they remain inside. At this stage they are still covered in thick white down although their scapulars, wing and tail feathers have emerged. As they get bigger the nest baskets are changed and the floor is lined with straw and lime twigs. Water is available ad-lib from a large container. It is important that the young pelicans get the opportunity to walk about by the age of about one month (Kaiser, 2006). The nest area is surrounded by a low wooden barrier, which the young pelicans perch on whilst exercising their wings.

At days 70-80 or thereabouts the young birds are moved from the exercise pen and introduced to the main group of pelicans in the safari park. The young birds are placed on the island, which has a small wooden house incorporated onto it. The low wooden surround (the wooden barrier above) is put around the house so that the birds have something they are familiar with. Initially the young pelicans are fed on the island and are then gradually encouraged to feed on the other side of the lake with the rest of the group. It is when they start feeding with the other pelicans that they become more confident about taking to the water, which for some does not seem to come naturally. The adults tend to show little interest in the new arrivals and will even permit them to stand on their nesting platforms. Three pelicans raised in 2005 took over one section of the platforms and used this as their main roosting site. There does seem to be some imprinting behaviour, especially at feeding times when they become very vocal and partake in head-wagging and wing-thrashing. Johnsgard (1993) stated that these movements are a sign of begging for food. After a couple of months they grow out of this and start conducting themselves in a more mature manner and become less dependent on the keepers.

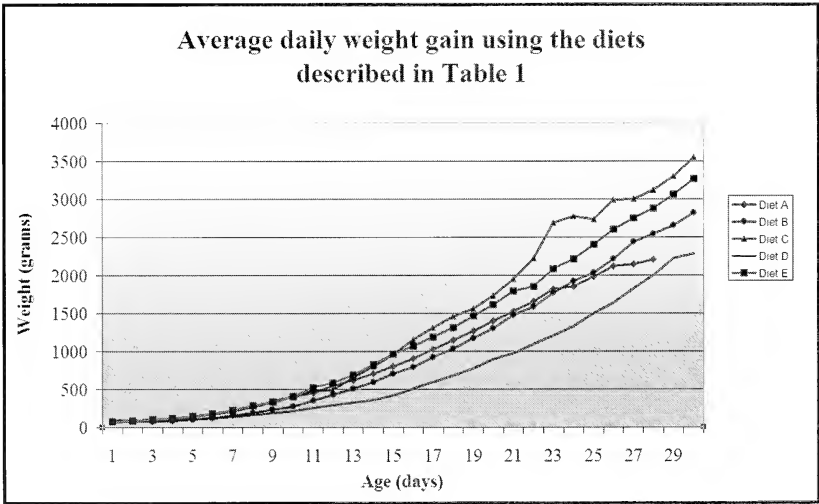
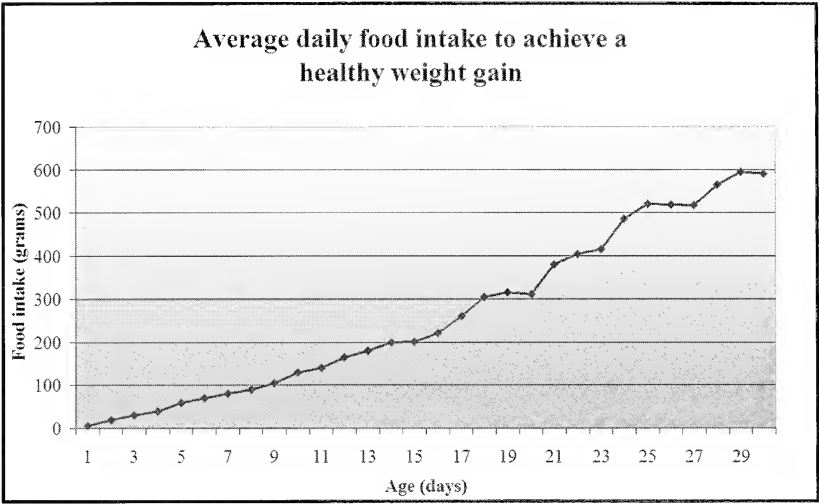


*Photo Michelle Stevens*

**The pelican nesting platforms at Longleat Safari Park.**

## **Discussion**

There was quite a difference in the average weight gains achieved using each of the different diets listed in Table 1 (see second graph p.114). Diet C produced the best daily weight gain. There appeared to be a loss of weight at day 25, but on checking the records this seems to have been due to the fact that it had regurgitated fish on day 23 and had not eaten enough on day 24 to make up for this loss. The high overall weight gain may have been due to the inclusion of day-old chicks (which tend to be a high fat source of food) from an early age. The second best weight gain was achieved using Diet E, Longleat's current diet, followed by Diet B. Diet B (1998) was replaced by Diet D in 2001. This may have been due to the unavailability of certain items of food, but the results show there was a distinct difference in growth rates. They also suggest that this diet was detrimental to the chicks' health, as all four hand-reared to adulthood had a calcium deficiency problem. I believe this was due to the fact that the Avimix powder was mixed with water and administered via a syringe. Avimix is not water soluble so it is questionable whether the chicks got enough of this supplement, especially as chicks drink varying amounts of water each day. Placing twigs in the nest bowls and crates has also proved beneficial in preventing foot deformities.



Numbers of chicks on which averages are based: Diet A = 8; Diet B = 10; Diet C = 1; Diet D = 4; Diet E = 3. Note: Diet A (Tierpark Berlin) is for the first 27 days only.

The chicks fed on Diet A at Tierpark Berlin started off following a similar growth curve as the others but later their growth slowed down.

## **Conclusion**

The hand-rearing techniques used by the collections in the study appear to be working to a degree, as a number of birds have been hand-reared using them. The techniques currently being applied at Longleat, look promising but the diet and feeding regime needs to be tested on a larger number of chicks to get more accurate results. This also applies to the results shown on the first graph (p.114). The problem experienced at Longleat with yolk retention does not seem to have occurred in the other collections and is something which needs further research on a wider scale (i.e. the participation of more collections). Given more time and the cooperation of other collections, I feel that answers to the above questions can be found. As I was writing up this study a lot of other questions occurred to me and in hindsight I wish I had produced a more in-depth questionnaire.

## **Recommendations**

I feel that the following points should be addressed in the future, so that the breeding programme for the Pink-backed Pelican can move forward and achieve greater egg viability and survival of the young:

Research into yolk retention: its causes, management and most importantly its prevention.

The introduction of more female birds into the existing group at Longleat, to increase genetic variation and level out the uneven ratio of males to females. This may also improve the likelihood of the group producing parent-reared chicks.

Research into how other collections manage to hatch and raise parent-reared birds.

Greater analysis of diets to determine which produces the best food intake to growth ratio.

Greater cooperation between collections which have successfully bred this species, so that a clear set of guidelines can be produced, that are scientifically accurate and can be used by other collections.

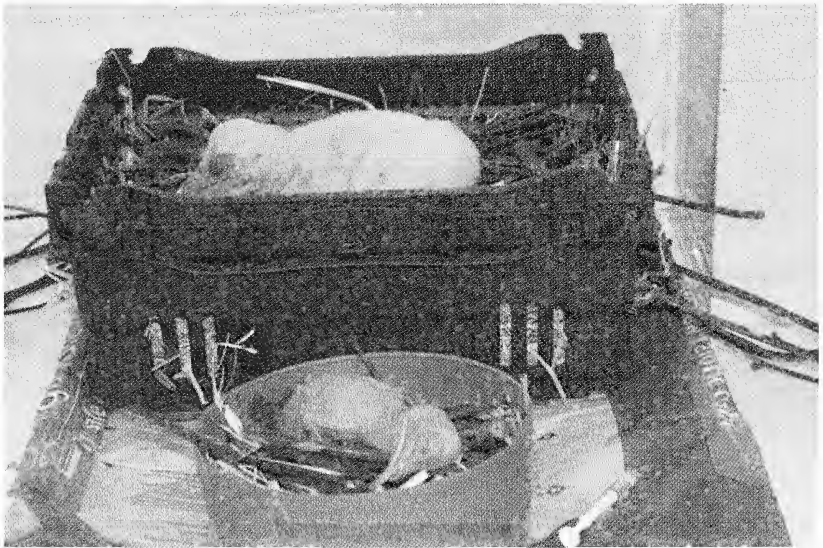
## **Acknowledgements**

I would like to thank Mark Tye, my Head of Section at Longleat Safari Park, for sharing with me his knowledge of hand-rearing Pink-backed Pelicans and for his support throughout the study. I would also like to thank Mike Curzon MBE for his help and guidance when I was researching relevant reference material. Without their help, guidance and support, this



*Photo Michelle Stevens*

**The hand-rearing set-up.**



*Photo Michelle Stevens*

**Examples of types of containers used at Longleat. The chick at the back is 15 days old. It is 10 days older than the chick in the foreground. The chicks' down starts to develop at seven to 10 days old.**



*Photo Ian Turner, Longleat*

**The chicks are encouraged to pick up food themselves.**



*Photo Michelle Stevens*

**Ultrasound being used to check a 12 day old chick for retained yolk.**

study would not have been possible. I also wish to thank Martin Kaiser of Tierpark Berlin, Joost Lammers of Vogelpark Avifauna and staff at Odense Zoo for their help and cooperation.

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*The above study by Michelle Stevens was undertaken as part of the Advanced National Certificate in the Management of Zoo Animals. Michelle works at Longleat Safari Park, Longleat Park, Warminster, Wilts. BA12 7NJ, UK. Website: [www.longleat.co.uk](http://www.longleat.co.uk)/E-mail: [safarioffice@longleat.co.uk](mailto:safarioffice@longleat.co.uk)*

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## BREEDING LAYARD'S BLACK-HEADED WEAVER

### *Ploceus cucullatus nigriceps*<sup>1</sup>

by Graham Thurlow

In the spring of 2004 I transferred a pair of Layard's Black-headed Weavers into a new outdoor flight measuring 14ft x 8ft x 7ft high (approx. 4.2m x 2.4m x 2.1m high). The birds also had access to an indoor flight measuring 8ft x 3ft x 6ft high (approx. 2.4m x 0.9m x 1.8m high), that forms part of my birdroom which is heated to a minimum of 60°F (15.6°C). During the previous three years the birds had been housed in a large indoor flight of similar dimensions to the new aviary and, although the male had diligently built nests throughout this period, the female had taken little interest in them.

During their first year the weavers shared the new aviary with two pairs of Java Sparrows *Padda oryzivora* and, once they were given access to the outside quarters, the male weaver immediately started nest building. Much to my surprise his preferred site was in the inside aviary, in which he suspended his nest from branches placed in the flight. The birds were offered raffia as nesting material and within three days the male weaver built a very solid globular structure with a short, downward pointing tunnel. Once it was complete, and whenever the female approached the nest, the male would suspend himself from the nest entrance, flapping his wings and swaying from side to side, "fuzzing and buzzing" in what with Layard's Black-headed Weaver passes for a song.

At that point I went on holiday assuming that, as previously, nothing would come of the attempt. When I returned a week later, however, the female weaver was nowhere to be seen. It was not until I opened the door to the indoor flight, that she flew out of the nest and into the outside aviary. A careful examination of the nest revealed two eggs. I therefore retreated quickly to allow the female to return to the nest. During the incubation period I did my best to see to all the birds in the birdroom without disturbing the female, which usually sat tight, until I came to renew the food and water in her flight. She would then beat a retreat, but always returned once I had left the birdroom. The male took no part in the incubation process or in the rearing of the chicks.

Approximately 10 days later an eggshell was found on the floor of the

<sup>1</sup> Recent field guides follow Clancy (1970) and use the name *P. c. paroptus* rather than *P. c. nigriceps* which he regarded as being restricted to areas south of Tanzania. - Ed.

*Photo Graham Thurlow***Male and female Layard's Black-headed Weaver.**

flight and an examination of the nest revealed a chick and an unhatched egg, which subsequently proved to be clear. The eggs of Layard's Black-headed Weaver are rather elongated in shape and pale blue in colour, with the broad end slightly darker and decorated with dark spots and squiggles; the extent of these markings is variable, however.

The chick thrived initially on a diet of black field crickets, then as it grew bigger, it graduated onto waxworms and mealworms. It fledged after approximately 21 days, but continued to be fed by the female for some weeks, even during periods when she took a break from incubating her second clutch of eggs. Within 24 hours of the chick leaving the nest the

male dismantled it and started to build a new nest in the same position; this has proved to be the norm.

Within a couple of weeks the female was again incubating two eggs and this time hatched and reared two chicks to fledging. There was an obvious age difference between the fledglings, the younger of which was ignored by its parent. This again has proved to be the norm with this species, with only the eldest chick being fed once the youngsters have left the nest. This even happened on the single occasion when three eggs were laid and three young fledged; attempts at hand-rearing at this stage have, to date, been unsuccessful. Others breeding Village Weavers suggest this is normal, with only one chick per clutch reaching independence.

In the first season two chicks were reared to independence, which subsequently proved to be a male and female. The pattern was similar the following year, with two chicks being reared, which again proved to be a male and female.

Although considered to be seedeaters, I have found that these weavers are really omnivores with a marked preference for livefood. They also take a significant amount of fruit in the form of soft pear, melon and pawpaw (papaya). Seed is taken only in relatively small quantities and then only plain canary seed, millet sprays and small striped sunflower seed; the various forms of loose millet are ignored.

This year (2007) has been disappointing in that the old pair have produced three clutches of eggs to date (the end of June) and all have proved to be infertile, despite mating having been observed. I therefore assume that the old male is no longer fertile. The birds appear to reach sexual maturity and full colour in their second year and the young birds from the first successful season have now formed a pair and have two chicks - a less than ideal situation - and I fear that unless I can find new stock this small colony is doomed. I would be pleased, therefore, to hear of anyone keeping this species of weaver.

*The author, an Avicultural Society Council Member, lives in Yorkshire. He can be contacted through the Hon. Editor.*

## NOTES ON A TRIP TO SRI LANKA

by Colin Scott

Until I was asked if I fancied joining an organised trip to Sri Lanka, I had never given any thought to visiting this tropical island just off the south-east coast of India. A quick look on the internet revealed that it has just over 400 species of birds - including 26 endemic species and just over 70 endemic subspecies - a large range of mammals including the Asian Elephant *Elephas maximus* and the Leopard *Panthera pardus*, and is described as a "global hotspot" for reptiles. In addition, it has a rich culture and a long history and many World Heritage Sites.

Departure day, February 3rd, earlier this year, finally arrived and after a nine hour delay at Heathrow, we were on our way. Eleven hours later we landed at Colombo Airport, where we were met by Prasanjith Caldera, our guide. There followed a five hour drive to Sigiriya Village Hotel, the first of nine different hotels we stayed at. On the way we saw: Little Egret *Egretta garzetta*, Intermediate Egret *Mesophoyx intermedia*, Cattle Egret *Bubulcus ibis*, Indian Pond Heron *Ardeola grayii*, Asian Open-billed Stork *Anastomus oscitans*, White-throated Kingfisher *Halcyon smyrnensis*, Stork-billed Kingfisher *H. capensis*, Black-headed Ibis *Threskiornis melanocephalus*, Honey-Buzzard *Pernis ptilorhynchus*, Ashy Wood-Swallow *Artamus fuscus*, White-bellied Drongo *Dicrurus caerulescens leucopygialis*, Spotted Dove *Streptopelia chinensis ceylonensis*, Indian Roller *Coracias benghalensis*, Magpie Robin *Copsychus saularis*, Tri-coloured Munia *Lonchura malacca* and Common Mynah *Acridotheres tristis melanosturnus*. Another species we saw was the Indian Ring-necked Parakeet *Psittacula krameri*, one of five species of parrot found on Sri Lanka. We were quite tired by the time we arrived at the hotel, so took a short rest and had something to eat, before we took a walk around the garden and in the surrounding woodland beside a large lake, to which the famous Sigiriya Rock Fortress provided a stunning backdrop. Among the birds we saw over the next few days were: Lesser Whistling Duck *Dendrocygna javanica*, Pheasant-tailed Jacana *Hydrophasianus chirurgus*, Red-wattled Lapwing *Vanellus indicus*, Brahminy Kite *Haliastur indus*, Striated Heron *Butorides striatus*, Yellow Bittern *Ixobrychus sinensis*, Purple Heron *Ardea purpurea*, Crimson-fronted Barbet *Megalaima r. rubricapilla*, Brown-headed Barbet *M. zeylanica*, Coppersmith Barbet *M. haemacephala*, Tickell's Blue Flycatcher *Cyornis tickelliae jerdoni*, Paradise Flycatcher *Terpsiphone paradisi*, White-rumped Shama *C. malabarica leggei*, Emerald Dove *Chalcophaps indica robinsoni*, Pompadour Green Pigeon *Treron p. pompadora*, Indian Nightjar

*Caprimulgus asiaticus eidos*, Indian Pitta *Pitta brachyura* and Alexandrine Parakeet *P. eupatria*. We also saw a remarkable bird called the Grey-rumped Treeswift *Hemiprocne longipennis*, which with its upright crest, grey colour, orangish cheek patches (of the male) and size - 9in (22cm) - reminded me of a Cockatiel *Nymphicus hollandicus*.

On the second day, our first full day there, we climbed the Rock Fortress and got stunning views in all directions. On the way up we stopped to visit the world famous frescoes of the Heavenly Maidens of Sigiriya. We got great views of Shikra *Accipiter badius* and Shaheen *Falco peregrinus peregrinator*, the latter a subspecies of the Peregrine Falcon *F. peregrinus*. We also saw a Black-necked Stork *Ephippiorhynchus asiaticus*, a species previously unrecorded in the area.

The next day, after visiting Dambulla Cave Temple, another World Heritage Site, this one dating from the first century AD, we moved on to Kinjou Safari Village in Wasgomuwa National Park. During an afternoon jeep safari we saw: Spot-billed Pelican *Pelicanus philippensis*, Darter *Anhinga melanogaster*, Lesser Adjutant *Leptoptilos javanicus*, Woolly-necked Stork *Ciconia episcopus*, Asian Open-billed Stork, the beautiful Painted Stork *Mycteria leucocephala*, Changeable Hawk Eagle *Spizaetus cirrhatius*, Crested Serpent Eagle *Spilornis cheela*, Grey-headed Fish Eagle *Ichthyophaga ichthyaetus*, Sri Lanka Junglefowl *Gallus lafayetti*, Indian Peafowl *Pavo cristatus* and Chinese Painted Quail *Coturnix chinensis*. Other birds seen included: European Bee-eater *Merops apiaster*, Little Green Bee-eater *M. orientalis ceylonicus*, Blue-tailed Bee-eater *M. philippinus*, Streaked Weaver *Ploceus manyar*, Baya Weaver *P. philippinus*, Cotton Pygmy Goose *Nettapus coromandelianus*, Greater Coucal *Centropus sinensis*, Blue-faced Malkoha *Phaenicophaeus viridirostris*, Green Imperial Pigeon *Ducula aenea*, Malabar Pied Hornbill *Anthracoceros coronatus* and Black Drongo *Dicrurus macrocercus minor*. We also saw a number of mammals including: Sambar *Cervus unicolor*, Axis Deer or Chital *Axis axis*, Wild Boar *Sus scrofa*, Black-naped Hare *Lepus nigricollis*, Water Buffalo *Bubalus bubalis*, Grey Langur *Semnopithecus entellus* and a herd of 60-70 wild Asian Elephants.

On day four we moved to Kandy, travelling there via the Knuckles Mountain Range, with its breathtaking scenery. In the afternoon we visited the Royal Botanical Gardens in Kandy, which was a real treat for the green fingered amongst us. There we saw: Indian Hill Mynah *Gracula religiosa*, White-bellied Sea Eagle *Haliaeetus leucogaster*, Black Bittern *I. flavicollis*, Purple Sunbird *Nectarinia asiatica*, Long-billed *N. l. lotenia*, Purple-rumped Sunbird *N. z. zeylonica*, Golden-fronted Leafbird *Chloropsis aurifrons* and Spicebird *L. punctulata*. We also experienced the noise and commotion of a fruit bat roost with an estimated 10,000 occupants.



Photo © Colin Scott

**Layard's or the Emerald-collared Parakeet is among a number of species found only on Sri Lanka.**

Day five involved an early morning visit to Udawallakelle Forest Reserve in the city. There we saw two more parrot species, both of which are endemic to Sri Lanka. One was the Sri Lanka Hanging Parrot *Loriculus beryllinus* and the other was Layard's Parakeet *P. calthorpeae*. We also saw the Sri Lanka Grey Hornbill *Tockus gingalensis* and Yellow-fronted Barbet *M. flavifrons*, both endemic to the island. Other birds we saw included: Greater Flameback (Woodpecker) *Chrysocolaptes lucidus stricklandi*, Red-backed Woodpecker *Dinopium benghalense psarodes*, Scarlet Minivet *Pericrocotus flammeus*, Black-headed Yellow Bulbul *Pycnonotus m. melanicterus* and Black Bulbul *Hypsipetes leucocephalus humii*. In the afternoon we visited Pinnawala



*Photo © Colin Scott*

Another species found only on the island of Sri Lanka is the Sri Lanka Hanging Parrot.



*Photo © Colin Scott*

Coppersmith Barbet.

Elephant Orphanage, one of Sri Lanka's biggest tourist attractions, which has a herd of over 80 elephants that take part in a daily parade, travelling from their grazing pasture through the streets to the river to cool off. It is quite a spectacle. Just up the road is the Millennium Elephant Foundation which rescues elderly, sick and mistreated elephants. There it is possible to get 'hands on' experience and it is well worth a visit.

After spending two nights in Kandy, it was time to move again but before we left we visited the Temple of the Sacred Tooth. Then we set-off for Nuwara-eliya situated in the highlands at about 2,000m-(6,500ft). On the way we stopped to visit a tea plantation and a tea factory. In the afternoon we visited Hakgala Gardens which were established in 1860. The following endemic species were seen there: Sri Lanka Wood Pigeon *Columba torrringtoni*, Sri Lanka White-eye *Zosterops ceylonensis*, Dull Blue Flycatcher *Muscicapa sordida*, Yellow-eared Bulbul *P. penicillatus*, Sri Lanka Whistling Thrush *Myophonus blighi* and the Purple-faced Leaf Monkey *Semnopithecus vetullus*. Other birds seen were: Grey-headed Canary Flycatcher *Culicicapa ceylonensis*, Velvet-fronted Nuthatch *Sitta frontalis*, Brown Shrike *Lanius c. cristatus*, Scaly-breasted Rail *Rallus striatus* and Hill Swallow *Hirundo tahitica domicola*.

The next day we made an early start, returning at first light to Hakgala Gardens, before travelling onto Horton Plains National Park situated at 2,500m (approx. 8,200ft). On day eight we made another early start, this time travelling to Yala National Park, Sri Lanka's most famous park, which is situated on the south-east coast, which bore the brunt of the Boxing Day 2004 tsunami. Yala is a very large park situated in the dry zone, with a diversity of habitats ranging from scrub forest to reservoirs, a brackish lagoon and an estuary. We saw more elephants and had good views of the elusive Leopard in this park, which is well-known for its species of mammal. Birds not previously seen included: Barred Buttonquail *Turnix suscitator*, Eurasian Thick-Knee *Burnhinus oedienemus*, Rosy Starling *Sturnus roseus*, Black-winged Stilt *Himantopus himantopus* and Orange-breasted Fruit Pigeon *T. bicincta leggei*. On the morning of day nine we visited the Bundala Ramsar Wetland National Park, which comprises scrub jungle and coast, with large salt pans which are flooded and then sealed to allow the water to evaporate and leave behind the salt which is collected by hand. It is very labour intensive work carried out in extremely hot temperatures. Large numbers of waders and other coastal birds were present. After lunch some of us went on a jeep safari to Udawalawa National Park, an area of scrub jungle and tall grass, where we saw: Black-shouldered Kite *Elanus caeruleus*, Plaintive Cuckoo *Cacomantis merulinus*, Yellow-crested Woodpecker *Picoides mahrattensis* and the fifth and final parrot species found on Sri Lanka, the Plum-headed



Parakeet *P. cyanocephala*.

On day 10 we set off to spend two days at one of our most eagerly anticipated destinations - the rainforest. Sinharaja Man and Biosphere Reserve is a World Heritage Site and has been an area of intensive study. The following birds are all endemic to Sri Lanka and were new to us: Sri Lanka Blue Magpie *Urocissa ornata*, White-faced Starling *S. senex*, Ashy-headed Laughingthrush *Garrulax cinereifrons*, Orange-billed Babbler *Turdoides rufescens*, Sri Lanka Mynah *G. ptilogenys*, Sri Lanka Spurfowl *Galloperdix bicalcarata*, Sri Lanka Frogmouth *Batrachostomus moniliger*, Red-faced Malkoha *P. pyrrhocephalus*, Spot-winged Thrush *Zoothera spiloptera* and White-throated Flowerpecker *Dicaeum vincens*. Altogether we saw 15 endemic bird species at Sinharaja, as well as: Malabar Trogon *Harpactes fasciatus*, Indian Cuckoo *Cuculus micropterus*, Golden-fronted Leafbird, Common Iora *Aegithina tiphia*, Dark-fronted Babbler *Rhopocichla atriceps*, Asian Brown Flycatcher *M. daurica*, Black-naped Monarch Flycatcher *Hypothymis azurea ceylonensis*, Crested Drongo *D. paradiseus lophorhinus*, Yellow-billed Babbler *T. affinis taprobanus*, Oriental Bay Owl *Phodilus badius assimilis* and Spot-billed Eagle Owl *Bubo nipalensis blighi*.

On day 12 we left Martin's Lodge in Sinharaja Forest and headed for the coast. The beach at Bentoto is a breeding area of several species of turtle and there was a turtle hatchery less than 100yds (90m) from our hotel. Hundreds of young Green Turtles *Chelonia mydas* were awaiting their release and injured turtles, including Ridley's Green Turtles *Lepidochelys olivacea* and Hawksbill Turtles *Eretmochelys imbricata*, were being nursed back to health. We were invited to return after dark to assist in the release of about 150 young turtles. On the way back to the hotel we learned that two adult females were hauling themselves out of the sea and would shortly commence egg laying. These immense creatures estimated to weigh 300kg (approx. 665lbs) are so vulnerable at this time. Local fishermen eager to supplement their income collect the eggs as they are laid. Some are sold to hatcheries and others are sold as food.

We spent days 13 and 14 at Ranveli Holiday Village, which is situated on a small island. We took a boat trip around the mangrove lagoons, where we had good views of Yellow Bittern and various kingfishers and saw lots of other waterbirds. Otherwise we spent the time relaxing before the long journey home.

It was the best trip I have ever been on. We managed to pack in so much over the 15 days, thanks to the meticulous planning of Prasanjith Caldera, our guide. The food, accommodation, the mix of culture, wildlife, scenery and attractions, were all excellent. I would have no hesitation in recommending



*Photo © Colin Scott*

**Indian Pitta.**



*Photo © Colin Scott*

**Painted Stork.**



*Photo © Colin Scott*

**Yellow-wattled Lapwing *Vanellus malabaricus*.**

Jith, as he is known, as a guide to anyone planning a visit to this beautiful island. You can visit his website:[www.walkwithjith.com](http://www.walkwithjith.com)

*Colin Scott is a UK member who lives in north Devon.*

## THE MISTLE THRUSH'S FEET, AN OVERLOOKED ADAPTATION

by Derek Goodwin

Nearly everyone who has written about the habit of the Mistle Thrush *Turdus viscivorus* of guarding berried trees and shrubs, especially berry-bearing Holly trees *Ilex aquifolium* and clumps of Mistletoe *Viscum album*, driving from them other berry-eating birds, especially other species of thrush *Turdus* spp., have emphasised how like a Sparrowhawk *Accipiter nisus* it is in the way it flies to attack them, singling out one individual and trying to come on it suddenly round the side of the guarded Holly tree or Mistletoe clump. The fear felt by these birds being often so great that they make no attempt to feed from them afterwards unless they see the Mistle Thrush is being kept away by the presence of humans. Although in hard weather, with snow cover and all unguarded fruit already eaten, other thrushes and Waxwings *Bombycilla garrulus*, when starving, form flocks and overwhelm the guarding Mistle Thrush which can only attack one individual at a time.

See especially two excellent and well-written books, *Birds and Berries* by Barbara and David Snow (1988) and the monograph *The Sparrowhawk* by Ian Newton (1986). In a recent issue of *Bird Watching*, Cousens (2007) also made no mention of leg and feet colour, although the colour plate p.45 clearly showed the yellow legs and feet and black claws of the Mistle Thrush.

I phoned David Snow, a long-time friend and nearly as long an ex-colleague of mine and he said that, unlike me he had never seen an attacking Mistle Thrush from in front and only a little above him unobscured by branches. I had and it was a very memorable experience, though it occurred, I think, in the 1970s. It was a fine and relatively mild day in late winter and I had been walking along a track near a wood where a pair of Sparrowhawks usually bred, when I saw what I at first thought was some *Accipiter* spp. unknown to me, its bright yellow legs and black-clawed feet were stretched down but then upwards and forwards. It was terrifying as I thought it was going to strike my face and only when it swerved past me and round the berry-laden Holly bush did I realise it was, in fact, a Mistle Thrush.

Consulting photographs in books later I realised that the odd-looking breast pattern, which had made me think it was an unknown hawk, is in fact very like that of an immature Sparrowhawk.

The only other kind of thrush I have been able to find described as having similar coloured legs and feet is the Yellow-legged Thrush *Platycichla flavipes*. As its generic name suggests, this species has a stouter bill and wider gape than typical thrushes. The male of a pair I saw close when in Brazil in 1972 had a bright orange bill and orange-yellow legs, I did not

notice the colour of his claws. His plumage was mainly black with a slaty grey area on the back. The brown female had a bright yellow bill and legs. As many fruit-eating tropical birds drive away other fruit-eaters from the trees they are feeding on or guarding against an expected future shortage it seems highly likely that the Yellow-legged Thrush also uses its legs and feet to enhance its threatening flight chase as the Mistle Thrush does.

## References

- Cousens, D. 2007. *The Mistle Thrush*. *Bird Watching* May 2007.  
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## JUST FINCHES AND SEED-EATERS

Finches '08, the Third International Finch and Seed-eater Convention, organised by the Queensland Finch Society, will be held from May 2nd-May 4th 2008, in Brisbane, Australia. Among the speakers will be Jugal Tiwari from Gujarat, who will talk about a study of the Green Avadavat *Sporaeginthus formosus* (*Amandava formosa*) in India; Howard Robinson from the UK, who will describe his experiences of keeping and breeding the more unusual estrildids; and Simon Espley from Cape Town, South Africa, who will talk about breeding African finches the African way. Further information is available from: The Convention Registrar, PO. Box 219, Capalaba, Queensland 4157, Australia. Tel:+61 7 3822 3826/Fax:+61 7 3822 6565/E-mail:flashlpalm@ozemail.com.au

## HORNBILLS IN THAILAND – 2006

Through the Hornbill Research Foundation, Hornbill Family Adoption Programme in southern Thailand, the Avicultural Society in 2006 again adopted two pairs of hornbills, a pair of Great Hornbills *Buceros bicornis* and a pair of Rhinoceros Hornbills *B. rhinoceros*. Both pairs again succeeded in each fledging one chick. The Great Hornbill chick fledged on August 1st and the Rhinoceros Hornbill chick fledged on June 30th. The female Great Hornbill entered the nest hole on March 22nd and emerged on May 20th and assisted her mate find food for the chick. The female Rhinoceros Hornbill entered the nest hole on March 14th and emerged on June 12th and helped her mate find food to bring to the nest for the chick.



Courtesy Rolex/Tomas Bertelsen

**Rhinoceros Hornbill at nest hole.**

The pair of Great Hornbills nested on Budo Mountain (part of Budo Sungai-Padi National Park), Raman District, Yala Province. First found in 1998, the nest cavity is 29m (approx. 95ft) above the ground in a 44m (approx. 145ft) tall *Shorea faguettiana*. Food brought to the nest by the male consisted of fruits of *Ficus* spp., *Oncosperma tigillarum*, *Dysoxylum* sp, *Polyalthia* sp, *Sterculia pexa*, *Litsea* sp, *Canthium* sp, *Aglaia spectabilis*, *Knema* sp, *Syzygium* sp and *Aphanamixis polystachya*. The list of animal foods brought to the nest consisted of centipede, lizard, skink, spider, wal king

stick insect, millipede, locust, scorpion, leaf insect and snake. The data was collected by Mr Haseng Karija of the Jakoa Group.

The pair of Rhinoceros Hornbills nested on Budo Mountain (part of Budo Sungai-Padi National Park), Bacho District, Narathiwat Province. First found in 1999, the nest cavity is 11m (approx. 36ft) above the ground in a 67m (approx. 220ft) tall *Shorea faguetiana*. The nest entrance measures 33 cm x 12 cm (approx. 1ft 1in x 5in). Due to unrest in Narathiwat, Yala and Pattani Provinces and prolonged heavy rain, the feeding data is incomplete, but would probably not have differed greatly from that of previous years.

In Budo Sungai-Padi National Park, 19 female Great Hornbills were known to have been sealed in nest cavities, with 15 of the nests having been successful. Eleven female Rhinoceros Hornbills were known to have been sealed in nest cavities, with eight nests having been successful. In addition, two female Helmeted Hornbill *Rhinoplax vigil*, three female Wreathed Hornbills *Aceros undulatus*, one female Bushy-crested Hornbill *Anorrhinus galeritus* and one female White-crowned Hornbill *Berenicornis comatus* were known to have been sealed in nest cavities, with all of the nests having been successful.

In Khao Yai National Park, 26 female Great Hornbills were sealed in nest cavities, but only 17 of the nests were successful. All 14 Wreathed Hornbill nests were successful, 15 out of 17 White-throated Brown Hornbill *Ptilolaemus tickelli austeni* (or *P. austeni*) nests were successful and 25 out of 27 Oriental Pied Hornbill *Anthracoceros albirostris convexus* nests were successful.

The Great Hornbills in Huai Kha Khaeng Wildlife Sanctuary were the least successful, with young fledging from only nine of the 15 nests. A success rate of 60%. Seven of the eight Rufous-necked Hornbill *A. nipalensis* nests were successful and all five Plain-pouched Hornbill *A. subruficollis* nests, all six Tickell's Brown Hornbill *P. tickelli* nests and all 10 Oriental Pied Hornbill nests were successful.

On behalf of the Hornbill Research Foundation, Secretary-General, Prof. Dr Pilai Poonswad, has written to thank the Avicultural Society for its continued support in 2006. The foundation can be contacted: c/o Department of Microbiology, Faculty of Science, Mahidol University, Rama 6 Road, Bangkok 10400, Thailand. Tel:66-2201-5532/Fax:66-2644-5411/E-mail: scpps@mahidol.ac.th or hornbill\_project2003@yahoo.com

Note: *Clements Checklist of the Birds of the World*, Sixth Edition, published earlier this year, uses the following names: Helmeted Hornbill *Buceros vigil*, White-crowned Hornbill *Aceros comatus*, Brown Hornbill *Anorrhinus austeni* and Rusty-cheeked Hornbill *Anorrhinus tickelli*.

## BOOK REVIEWS

### “THE LIFE AND LEGEND OF A COLOSSAL FRAUD”

When a friend asked if I had heard of Colonel Meinertzhagen, I was able to respond that not only had I heard of him, I had slept in the same bed as him - though not at the same time, of course. When I first visited the Barnleys in the Cherengani Hills in western Kenya, I was boarded with Tim's mother, who put me in a bedroom in an annexe, telling me that the last person who had slept in the bed had been Colonel Meinertzhagen, when he was there studying African cuckoos.

A few weeks earlier, I had been on a birdwatching safari with Leslie Brown and Derek Wood, during which Leslie had cast doubt on some of Meinertzhagen's observations on, I think, the Lammergeier. “How can you trust the word of a man who shot a German officer in bed,” asked Leslie? He also alleged that Meinertzhagen had shot his wife. Ever since then I have wondered about the truth behind Leslie's startling allegations. Now, American author Brian Garfield has written *The Meinertzhagen Mystery: The Life and Legend of a Colossal Fraud*, in which he examines Meinertzhagen's life and attempts to answer these and many other questions. According to Meinertzhagen, on a raid into German East Africa during the First World War, he shot dead a German officer as he lay on his camp bed in his tent. Then, with another member of the raiding party, he sat down and ate the German officer's “excellent Xmas dinner.” It was, he wrote, “one of the best though most gruesome dinners I have ever had, including an excellent Xmas pudding.” However, Brian Garfield's research has revealed that the other officer in the raiding party was hundreds of miles away at the time of the alleged incident and Meinertzhagen according to his official reports was behind his desk in Nairobi.

Brian Garfield has consulted a vast number of books, official reports, papers and other documents, and from information in these is able to show that many of Meinertzhagen's daring exploits could not have taken place when he said they did, or in the way he described.

To quote from the dust jacket: “Col. Richard Meinertzhagen was an acclaimed British war hero, a secret agent, and a dean of international ornithology. His exploits inspired three biographies, his life has been the basis for movies and Jerusalem dedicated a city square to his memory. Meinertzhagen was trusted by Winston Churchill, David Lloyd George, Chaim Weizmann, David Ben Gurion, T. E. Lawrence, Elspeth Huxley, and a great many others. But he bamboozled them all. Meinertzhagen was a fraud.”



His second wife was shot in the head and died in 1928. He was the only eyewitness to the event and in the absence of compelling evidence to the contrary, the death was ruled an accident. Others though are not so sure. One theory is that his wife, an accomplished ornithologist, who had accompanied him during a birding trip to south Asia in 1925 and 1926, may have been shot by him, when she threatened to expose the fact that many of the rare birds he claimed to have collected during that trip, an account of which he published in *Ibis*, were in fact not his own, but had been stolen from other collections.

As far back as 1919, he had been caught stealing bird skins from the British Museum (Natural History) and had been banned from the Bird Room, but was allowed back after Lord Rothschild intervened on his behalf, even though he, too, is said to have suspected Meinertzhagen of stealing birds from him. It has been suggested that individuals at the museum may have been afraid of accusing him of stealing, fearing that his collection, said to have been the finest private collection of birds in existence, might go to the USA, as Lord Rothschild's collection had. Meinertzhagen had threatened to bequeath his collection to the American Museum of Natural History, but eventually donated his 20,000 or so bird skins to the British Museum (Natural History), together with nearly 600,000 specimens of Mallophaga (bird lice), fleas, flies and mites.

Many years later, when investigating the taxonomy of redpolls, Dr Alan Knox discovered that specimens Meinertzhagen claimed to have shot at the same time had been stuffed using totally different techniques. He was able to show that some of Meinertzhagen's skins had come from other collections and had been relabelled with fictitious data. Hundreds of his other skins were X-rayed and fibres from specimens of forest owlets were sent to an FBI laboratory for analysis, enabling it to be shown that all 14 of his unique records for species and subspecies collected on the Indian subcontinent, and many more rare birds in his collection, had also been stolen and fraudulently relabelled. It has been suggested that 5,000 skins in his collection could turn out to be fraudulent.

The Giant Forest Hog *Hylochoerus meinertzhageni*, the first example of which was shot by him in Kenya in 1904, is obviously genuine, as is, it seems, the Afghan Snowfinch *Montifringilla theresa*. The latter was named for Theresa Clay, his cousin, who when she was still a teenager, helped look after him and his three small children, following the death of his second wife, and was his constant companion until his death in 1967.

It is a fascinating book of which his bird thefts and deceptions are just a small part (one chapter). These are though surely destined to be the subjects of further books and articles.

*The Meinertzhagen Mystery: The Life and Legend of a Colossal Fraud* by Brian Garfield, 385 pages, several black and white photos, is published by Potomac Books, Inc., 22841 Quicksilver Drive, Dulles, Virginia 20166, USA. Price \$27.50 in the USA.

**Malcolm Ellis**

## **ALBATROSSES, PETRELS AND SHEARWATERS**

*Albatrosses, Petrels and Shearwaters of the World* by Derek Onley and Paul Scofield is a recent addition to the very useful and well respected Helm Field Guides. It is a 240 page guide with 45 colour plates illustrating the 137 species of albatrosses, petrels and shearwaters, diving petrels and storm-petrels that comprise the order Procellariiformes.

It is clearly aimed at the keen birdwatcher but would be useful for any cruise participant with more than a passing interest in seabirds. Greater travel opportunities and the availability of field guides such as this are resulting in more people taking an interest in the identification of seabirds.

Although most species are predominately black and white, the colour plates are valuable in allowing the portrayal of coloured bills, brown washes and subtle shade differences that are important aids to identification. The plates are a main feature of the guide and illustrate the range of plumages of juvenile, immature and adult birds, as well as showing differences between recognised subspecies. In addition, for the polymorphic species, also shown are their dark, light and, where this occurs, the intermediate colour phases. The level of detail is such that for some species fresh and worn plumages are also illustrated. Seabirds at sea can look very different under different light conditions and this and other difficulties of identification are addressed in an introductory chapter.

The publication of this guide is timely in that albatrosses are becoming increasingly threatened by long-line fishing and the survival of many of the smaller seabirds, all of which are largely dependent on fish, is increasingly threatened by the reduction of fish stocks through overfishing and for some species may also be impacted by climate change.

Many of the petrels, shearwaters and albatrosses breed on small islands from which predators were previously absent, but on which introduced cats and rats may play havoc. However, predator control and habitat restoration are now aiding their recovery, so there can be some optimism for seabird conservation.

Recent field and taxonomic work has resulted in a greater number of species being recognised than in the past, this being largely the result of a number of taxa that were previously considered as subspecies being now

treated as full species. However, the taxonomy and evolution of these fascinating birds is not fully understood and is not static. I recently had the opportunity to visit Round Island (a small island to the north of Mauritius), where recent studies suggest the Round Island Petrel may be a complex of three interbreeding types of petrels that are currently recognised as three separate species. I applaud the restoration and scientific work being conducted there by the Mauritius Wildlife Foundation.

Closer to home, the seabird islands of Skomer and Skokholm off the south-west coast of Wales are fully protected as home to many thousands of pairs of breeding Manx Shearwaters. These birds like most other members of the Procellariiformes disperse widely when not breeding and an important feature of this guide are the maps showing the locations of the breeding islands and the normal non-breeding ranges. Care may be needed though regarding the latter, as vagrancy is not unusual amongst these ocean wanderers.

More and more previously unrecorded albatrosses and petrels are now being identified by keen birdwatchers. An immature Atlantic Yellow-billed Albatross was rescued in late June 2007 and released after being found stranded at a coastal location in Somerset, here in the UK, only to be seen a few days later on an inland fishing lake in Lincolnshire, also in the UK, before what was considered to be the same individual was subsequently reported from near Malmo, Sweden.

Much remains to be learnt about these birds and books as well researched and as well illustrated as this will certainly encourage and promote a greater interest in these wonderful birds.

*Albatrosses, Petrels and Shearwaters of the World* (ISBN 978 07136 4332 9) by Derek Onley and Paul Scofield is published in the UK by Christopher Helm. Price £19.99 (paperback). In the USA, where it is published by Princeton University Press, it is available as a Princeton Field Guide. Price US\$29.95 (softback).

**Roger Wilkinson**

## LATEST FBF BREEDING REGISTER

*The Foreign Bird Federation Register of Birds Bred in the UK under Controlled Conditions for the Years 2002-2005* has been available for a while now (A summary of the previous edition, which covered 2001-2004, can be found on the inside back cover of the *Avicultural Magazine* Vol.112, No.1 (2006)). The number of birds listed as having been bred in 2005, 8,858, is considerably lower than the totals for 2002, 2003 and 2004, but is higher than that for 2001.

Partridges, pheasants and quail bred in 2005, included 37 Black Francolins *Francolinus francolinus*, five Madagascar Partridges *Margaroperdix madagascarensis*, 10 Mountain Bamboo Partridges *Bambusicola fytchii*, 17 Chinese Bamboo Partridges *B. thoracicus*, 18 Temminck's Tragopans *Tragopan temminckii* and two Mountain Peacock-Pheasants *Polyplectron inopinatum*.

The waterfowl numbers, which look as so they may have been under reported, include two African White-backed Ducks *Thalassornis leuconotus*, four Blue-winged Geese *Cyanochen cyanoptera*, 31 Marbled Teal *Marmaronetta angustirostris* and 18 Hooded Merganser *Lophodytes cucullatus*. Only two species of penguin, 16 Humboldt *Spheniscus humboldti* and 24 Jackass *S. demersus*, are listed.

Seven Giant Wood Rails *Aramides ypecaha* are listed as having been bred in 2005 and a Buff-breasted Rail *Gallirallus philippensis*. Fourteen Pied Avocets *Recurvirostra avosetta* and nine Blacksmith Plovers *Vanellus armatus* head the list of waders bred in 2005. An impressive 21 Inca Terns *Larosterna inca* were bred, a Common Guillemot *Uria aalge*, a Pigeon Guillemot *U. columba* and a Tufted Puffin *Fratercula cirrhata*. I believe the Common Guillemot and Tufted Puffin are UK first breedings, while the Pigeon Guillemot was the second to be bred in the UK.

Pigeons and doves bred in 2005 included eight Socorro Doves *Zenaida graysoni*, three Sulawesi Ground Doves *Gallicolumba tristigmata bimaculata* and a Mindanao Bleeding-Heart *G. cringera*, but no Luzon Bleeding-Hearts *G. luzonica*. Four Rose-crowned Fruit Doves *Ptilinopus regina* were bred. The number of parrots listed as having been bred is well down on the previous three years. Hopefully, this was just a blip, due to under reporting, for some reason. Those listed include two Moluccan Red Lories *Eos rubra rubra*, two Buru Red Lories *E. r. cyanonotha*, three Black-capped Lories *Lorius lory erythrothorax*, 21 African Grey Parrots *Psittacus erithacus erithacus* (compared to 736 in 2002, 523 in 2003 and 389 in 2004) and no *P. e. timneh*. It is hard to believe that just three Blue and Yellow Macaws *Ara ararauna*, four Military *A. militaris militaris* and four Red-fronted Macaws

*A. rubrogenys* were bred.

Turacos appear to have bred better than usual, with 2005 breedings including 26 White-cheeked *Tauraco leucotis*, 13 Schalow's *T. schalowi*, a Black-billed *T. schuetti* and five Ross's *Musophaga rossae*. The number of owls bred appears to have been roughly comparable to the number bred in each of the previous three years. Forty-seven Speckled Mousebirds *Colius striatus*, five Lilac-breasted Rollers *Coracias caudatus* and 10 Blue-bellied Rollers *C. cyanogaster* are listed as having been bred. Just three hornbills, one Crowned *Tockus alboterminatus* and two Von der Decken's *T. deckeni*, are listed, followed by three Toco Toucans *Ramphastos toco* (no aracaris) and just a solitary Bearded Barbet *Lybius dubius*.

Six Hooded Pittas *Pitta sordida* were bred, 39 Azure-winged Magpies *Cyanopica cyana*, 12 Omei Shan Liocichlas *Liocichla omeiensis*, 28 Pekin Robins *Leiothrix lutea* and 13 White-collared Yuhinas *Yuhina diademata*. Eleven White-shouldered Starlings *Sturnus sinensis* were bred, 11 Emerald Starlings *Lamprolornis iris*, 24 Superb *L. superb* and 16 Scissor-billed Starlings *Scissirostrum dubium*, but just three Bali Starlings *Leucopsar rothschildi*.

The breeding of 45 Brown Twinspots *Clytospiza monteiri* is especially noteworthy. One hundred and five Red-billed Firefinches *Lagonosticta senegala* were bred, 102 Golden-breasted Waxbills *Amandava subflava*, 68 Blue-capped Waxbills *Uraeginthus cyanocephala* and 65 Red-cheeked Cordon-bleus *U. bengalus*. Australian Estrildidae remain as popular as ever, though as with Australian parakeets, colour mutations seem to be more popular than the normal-coloured forms.

Sixty-nine Cuban Finches *Tiaris canorus* were bred, five Blue-necked Tanagers *Tangara cyanicollis*, one Burnished Buff *T. cayana*, one Opal-rumped *T. velia* and two Thick-billed Euphonias *Euphonia lanirostris*.

The full list of 8,858 birds of 452 species reported as having been bred in the UK in 2005 can be found in this latest *FBF Breeding Register*, available from FBF Registrar, Reuben B. Girling, 11 Deramore Drive, Badger Hill, York YO10 5HW, UK. The Avicultural Society continues to provide generous financial support towards the cost of distributing the *Breeding Register*, which is priced £5 (post free). Cheques (sterling only please) should be made payable to the "Foreign Bird Federation".

## NEWS & VIEWS

### ATTEMPTING TO SAFEGUARD PACIFIC PARROTS

A record £215,000 (approx. US\$430,000) was raised by Birdfair (The British Birdwatching Fair) 2006 to support BirdLife International's effort to conserve parrots and other threatened birds in the South Pacific region.

Earlier this year, as part of the project, a group of Rimatara Lorikeets *Vini kuhlii* was translocated from Rimatara in French Polynesia to Aitu in the Cook Islands. The multidisciplinary project team, which included members of the BirdLife International Partnership in French Polynesia and the Cook Islands, San Diego Zoo and community members from Aitu, arrived on Rimatara in April 2007. Two teams used mist nets to trap the birds in their favoured feeding areas around flowering trees and bananas. This proved unexpectedly successful and 27 were caught in the first week. The birds were housed in preconstructed aviaries and cared for by the staff from San Diego Zoo. All of the birds adapted well to confinement and were examined by a vet and given a clean bill of health.

The birds, accompanied by the project team and community members from Rimatara, were flown to Aitu on April 24th, on two aircraft generously provided by Air Rarotonga. Since their release small groups of birds have been seen regularly moving around the island and early indications are that they are settling in well. Evidence of breeding is eagerly awaited.

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### HELP FOR GURNEY'S PITTA

In 2005, the Birdfair raised £200,000 (approx. US\$400,000) towards the long-term conservation of Gurney's Pitta *Pitta gurneyi* in the lowland forests of Burma (Myanmar) and Thailand.

Activities in Burma have focused on securing a Memorandum of Understanding with the Forest Department, promoting the gazetting of Lenya National Park, securing co-financing from other donors and undertaking research on Gurney's Pitta. In Thailand an Action Plan has been agreed and activities there have resulted in improved forest protection, which has almost succeeded in stopping illegal forest clearance in the most important areas. The intensive guarding of nests has also led to increased breeding success. Furthermore, a tree nursery has been established to replant illegally cleared land. The population of Gurney's Pitta in Thailand now numbers 20 pairs and is continuing to grow steadily but the situation remains critical.

## SUCCESS WITH SOFTBILLS

Among the birds bred this year at Waddesdon Manor, which the society visited in April, were seven Rufous-bellied Niltavas *Niltava sundara*, 10 Chestnut-backed Thrushes *Zoothera dohertyi* (with six more in the nest (September 19th)), seven Orange-headed Ground Thrushes *Z. citrina*, four Blue-crowned Laughingthrushes *Garrulax c. courtoisi*, four Fairy Bluebirds *Irena puella* and eight Pekin Robins *Leiothrix lutea*. Over 70 birds had been bred by late September, most of which were softbills.

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## EUROPEAN PARROT BREEDING PROGRAMME

Dutch aviculturist José Appels, who has been keeping Blue-rumped Parrots *Psittinus cyanurus* for 14 years, last year started a European breeding programme for the species. So far she has traced about 18 breeders and 70 birds. If you keep this species or have any information about it, she would like to hear from you. She would specifically like to know whether you breed this species, how many you keep, what type of accommodation you keep them in and any other relevant information. To find out more you can visit her website: [www.psittinus-cyanurus-cyanurus.com](http://www.psittinus-cyanurus-cyanurus.com) or you can join the group by contacting her via e-mail: [info@psittinus-cyanurus-cyanurus.com](mailto:info@psittinus-cyanurus-cyanurus.com)

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## FLAGSHIP PROJECT FOR 2008

Built originally as a Reptile House, using money received from the sale of Jumbo the African Elephant *Loxodonta africana* to the famous American showman Phineas Barnum, and opened to the public in 1883 and then in 1927-1928 converted to house birds, ZSL London Zoo's dilapidated old Bird House is undergoing major renovation work and is due to reopen next Easter. The project will cost £2.3 million (approx. US\$4.6 million).

It is planned to preserve many of the building's charming Victorian features. Visitors will enter the building through the original, restored, foyer or entrance porch, in which there will be interactive displays, setting the Victorian theme and giving visitors a sense of anticipation of the tropical experience which awaits them when they enter the atrium. They will be able to continue through a door and into a 30m (approx. 98ft) long free-flight aviary. As they walk along the Victorian Promenade by a stream and transverse the path over a bridge towards a small waterfall, visitors will see such birds as Victoria Crowned Pigeons *Goura victoria* and Bali Starlings *Leucopsar rothschildi*. The door at the end will take visitors into the Avian

Jewels area, with sunbirds and hummingbirds, orchids and bromeliads. Individual aviaries will house female hummingbirds. Hummingbirds have not been kept at the zoo since the late 1970s and ZSL London Zoo will be the only zoo in the UK keeping these birds.

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## ANOTHER GOOD BREEDING SEASON

Paradise Park Wildlife Sanctuary at Hayle, here in Cornwall, enjoyed another good breeding season. Species bred included Humboldt Penguin *Spheniscus humboldti*, Black-cheeked Lovebird *Agapornis nigrigenis*, Yellow-shouldered Amazon *Amazona barbadensis*, Roseate Cockatoo or Galah *Eolophus roseicapillus*, Black-headed Caique *Pionites melanocephalus*, Green-naped Lorikeet *Trichoglossus h. haematodus*, Swainson's Lorikeet *T. h. moluccanus* and Northern White-faced Scops Owl *Ptilopsis* (formerly *Otus*) *leucotis*.

Other species bred included a Military Macaw *Ara militaris*, two Grey-necked Crowned Cranes *Balearica regulorum gibbericeps*, an



Photo Kirsty Jenkin

**Bali Starling at 15 days old. It hatched on August 14th 2007.**

Argus Pheasant *Argusianus argus*, two Temminck's Tragopans *Tragopan temminckii*, four Roulrouls or Red-crested Wood Partridges *Rollulus roulroul*, five Chiloe Wigeon *Anas sibilatrix*, a Baikal Teal *A. formosa*, seven Avocets





Photo Alison Hales

**Widowed Superb Starling feeding one of her two young.**

*Recurvirostra avosetta*, four Violet Turacos *Musophaga violacea*, three Red-crested Turacos *Tauraco erythrolophus*, four Von der Decken's Hornbills *Tockus deckeni*, six Speckled Mousebirds *Colius striatus*, five Red-billed Choughs *Pyrrhocorax pyrrhocorax*, at least 12 Gouldian Finches *Chloebia gouldiae* and six Spice Birds *Lonchura punctulata*.

Two pairs of Superb Starlings *Lamprolornis superbus* produced seven young between them. Sadly the male of one pair died unexpectedly, leaving the female with two chicks close to fledging. The female did well caring for them, bringing food in response to their begging calls. Their favourite food was waxworms. A pair of Bali Starlings *Leucopsar rothschildi* produced two clutches of infertile eggs before hatching a single chick from the three eggs of the third clutch.

Three members of staff did a sponsored parachute jump to raise funds for a proposed new penguin enclosure and the Free Flying Bird Show has now raised over £50,000 (approx. US\$100,000) for the World Parrot Trust (WPT) and, as Curator David Woolcock said, "that is an awful lot of collecting that the cockatoos have done in the last eight years."

## ASSESSING THE STATUS OF THE GREY PARROT

The African Bird Club Conservation Fund has allocated £900 (approx. US\$1,800) to enable Irene Madindou and Ronald Mulwa to assess the current status of a small population of Grey Parrots *Psittacus erithacus*, probably numbering fewer 10 pairs, which survive in the Kakamega Forest in western Kenya, close to the border with Uganda. Irene Madindou and Ronald Mulwa will attempt to assess the effects of the pet trade and habitat destruction on this, the last remaining population in Kenya. They will seek to document the current population in the Kakamega Forest, to develop a monitoring protocol for population trends, and examine habitat quality and trade activities. They will question local people, to assess the extent of their involvement in and attitude towards the (presumably illegal) trade in Grey Parrots. This species previously occurred also in the Nandi Forest in western Kenya.

\* \* \*

## WORLD'S LARGEST FREE-FLIGHT AVIARY

In *International Zoo News* Vol.54, No.5 (2007), pp.272-275, Isabel Wentzel wrote about the new Birds of Eden Free Flight Sanctuary (website: [www.birdsofeden.co.za](http://www.birdsofeden.co.za)) outside Plettenberg Bay in the Western Cape, South Africa, said to be the world's largest free-flight aviary (the world's largest free-flight aviary was previously said to have been the one in the KL (Kuala Lumpur) Bird Park in Malaysia). The South African structure spans an entire forest valley and consists of 70% indigenous forest, with the remainder made up of planted garden, lawns, grassland and several ponds formed by the damming of a watercourse. The walkway starts close to the forest floor and winds its way up towards the forest canopy, passing behind a waterfall on the way. A 48m (approx. 150ft) long suspension bridge - bathed in mist from a special misting system - spans the gorge and there is a 200-seat amphitheatre for special functions, two restaurants, a wine bar and a curio shop, etc.

The aviary houses approximately 2,000 birds of 180 different species, including various species of parrots, hornbills, toucans, turacos, doves, starlings, thrushes, cranes, flamingos, ibises, swans and other waterfowl, along with tamarins and fruit bats. The inhabitants include previously caged pet birds that went through a process of rehabilitation before being released into the aviary.

## REARED IN TEXAS

Two Andean Cock-of-the-Rock *Rupicola peruvianus* chicks were reared earlier this year at The Dallas World Aquarium, reports Josef Lindholm. One was hand-reared from the day it hatched and the other was parent-reared. Josef believes it is the first time two different females in the same collection have hatched chicks the same year. For the first time an Ornate Hawk-Eagle *Spizaetus ornatus* was hatched and parent-reared at The Dallas World Aquarium. Several pairs of Pale-mandibled Aracaris *Pteroglossus torquatus erythropygius*, Green Aracaris *P. viridis* and Ivory-billed Aracaris *P. azara* hatched young, as well as Crimson-rumped Toucanets *Aulacorhynchus haematopygus* and Guianan Toucanets *Selenidera culik*. More than 20 Ocellated Turkeys *Meleagris ocellata* were bred, two Yellow-knobbed Curassows *Crax daubentoni* and two Hawk-headed Parrots *Derophtyx accipitrinus* were parent-reared.

\* \* \*

## COOPERATIVE BREEDING PAYS OFF

Cooperative breeding is most common amongst species of African starlings that inhabit savannahs, where the rainfall varies greatly from one year to the next, according to a report by Dustin Rubenstein and Irby Lovette quoted in *Birdscope* Autumn 2007, Vol.21, No.4, p.1. "When you don't know what conditions you will be facing in the next breeding season, it pays - in an evolutionary sense - to live and breed in family groups because more chicks survive over the long haul," said Rubenstein, who initiated the study as part of his graduate work at Cornell Lab of Ornithology. Rubenstein and Lovette say that it is not the amount of rainfall that really matters, but rather whether the rainfall pattern is predicatable. The Superb Starling *Lamprolornis superbus* is a prime example of an African starling that lives and breeds in family groups.

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